

**HINTS on**

**Illuminating**

WITH AN ESSAY ON THE ART OF

**ORNAMENTING**

IN

**GOLD OR METALS**

DESCRIBING A NEW & EASY METHOD OF BRILLIANTLY & DURABLY  
IMITATING THE ILLUMINATED GILDINGS OF THE MIDDLE AGES.

BY  
**HENRY M. JACOBSEN.**

SEVENTH EDITION. REVISED & ENLARGED.

TO WHICH IS ADDED A SERIES OF PLATES BY F. C. WOOD.

**LONDON. BARNARD & SON.**

339, OXFORD STREET.

PRICE ONE SHILLING.

THE GETTY CENTER LIBRARY



*Why ask for the moon  
When we have the stars?*

#35 ✓



The page is framed by a wide, intricate border of black and white floral motifs, including stylized leaves and small flowers. Within this border, a central rectangular panel is defined by a dark blue line. The text is arranged within this panel. The word 'Wisdom' is written in a large, black Gothic script with a red initial 'W' and red penwork flourishes. Below it, the words 'is better' are in a smaller, blue Gothic script. The word 'than' is in a red Gothic script. Finally, the word 'Strength' is in a large, black Gothic script with blue penwork flourishes.

Wisdom

is better

than

Strength

# HINTS ON ILLUMINATING

WITH AN

## ESSAY ON THE ART

OF

## Ornamenting in Gold or Metals

DESCRIBING A NEW AND EASY METHOD OF BRIL-  
LIANTLY AND DURABLY IMITATING THE  
ILLUMINATED GILDING OF THE  
MIDDLE AGES

BY

HENRY MONTANELL LUCIEN



SEVENTH EDITION REVISED

TO WHICH IS ADDED A SERIES OF PLATES BY F. C. WOOD

LONDON

J. BARNARD AND SON

339 OXFORD STREET

WHOLESALE DEPARTMENT: 115, GT. TITCHFIELD STREET





CONS

ND

3310

L8 9

1870

LONDON:

CHARLES FREDERICK ADAMS, PRINTER,

BARTHOLOMEW CLOSE, E.C.

THE GETTY CENTER

LIBRARY

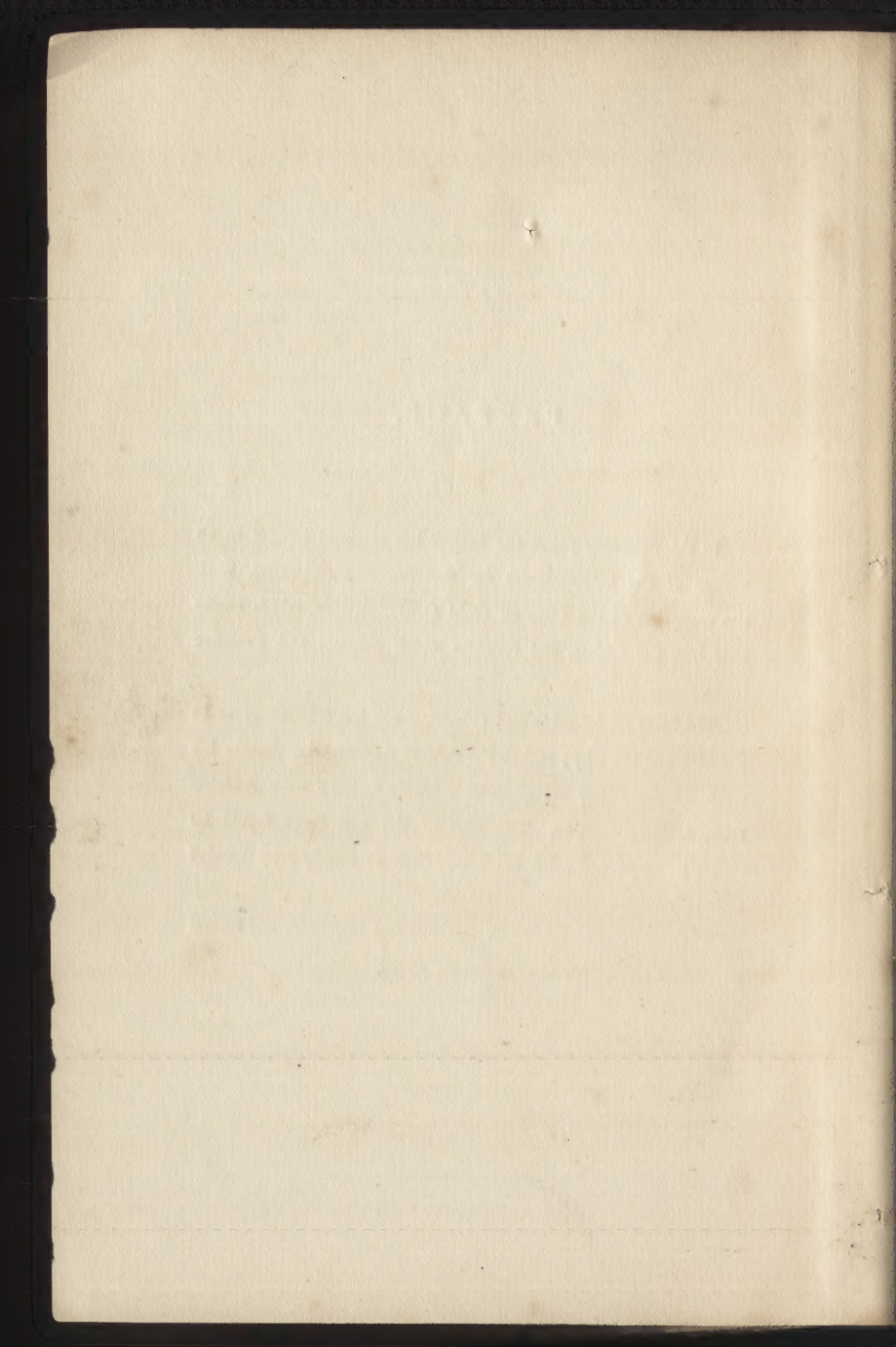
## PREFACE.



IN the following pages the author has confined himself to an outline of the indispensables for successfully illuminating, with the exception of the Essay on Gold Ornamentation, which enters fully into the subject, and contains much original and exclusive information.

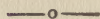
The hints on designing and colouring are but suggestions as to the how and the why; and to the tasteful student who pursues his work *con amore* they are quite as valuable as, and more readable than, lengthy treatises. The aim of the real artist should be rather to adapt and work out hints, than to merely copy detailed verbal directions.

The present edition is much enlarged and improved, and several new plates and a table of contents are added.





# CONTENTS.



## CHAPTER I.

	PAGE
Illumination . . . . .	7
Outlines for Commencement . . . . .	9
Copying . . . . .	ib.
Original Designs, Principles to be followed . . . . .	11
Initials . . . . .	13
Borders . . . . .	ib.
Backgrounds . . . . .	13
Figures. Groups, Drapery . . . . .	ib.
Relative Sizes (or Scales) . . . . .	14
Colouring . . . . .	ib.
Theory of Colour . . . . .	ib.
Observations on Construction . . . . .	17
Recapitulation . . . . .	ib.

## CHAPTER II.

Choice of Materials . . . . .	20
Paper and Vellum . . . . .	ib.
Tracing . . . . .	22
Brushes and Pens . . . . .	ib.
Colours . . . . .	23
Peculiarities and Combinations of Colours . . . . .	25
Table of Colours and Tints . . . . .	31

## CHAPTER III.

	PAGE.
Metallic Ornamentation . . . . .	35
Refum� of Difficulties . . . . .	36
Directions for Gilding, Silvering, Burnishing . . . . .	37
Leaf Gilding, Silvering, etc. . . . .	42
Alumina and Platinum Leaf . . . . .	47

## CHAPTER IV.

Description and Explanation of the Illustrations . . . . .	50
--	----

A large, stylized handwritten signature in dark ink, appearing to read 'W. H. Miller', is positioned at the top of the page. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

## HINTS ON ILLUMINATING,

ETC.

---

### CHAPTER I.

#### ILLUMINATION.

THE taste for artificially studying the illuminations of the middle ages is rapidly increasing. The revival of the Art of Illuminating is to be hailed as a sign of the times. That we begin at last to appreciate the exquisite models handed down to us by our forefathers shows a decided step in public taste; indeed, the fine arts generally have sprung prominently forward within the last few years. In the seventeenth century the art of illuminating disappeared; its death-blow was the general introduction of the printing-press. From the Renaissance period till very lately, there has been a steady decay of the fine arts; so shamefully, indeed, has beauty been despised and rejected, that but a few years back illuminated manuscripts were destroyed and cut to pieces for commercial purposes, such as gold-beating. This modern Vandalism has, we are happy



to feel, at length given way, the fine arts are now very highly cultivated, and they are obtaining a stronger and stronger hold on the affections of refined minds.

The following hints point out, like a sign-post, with the utmost brevity, the necessary directions on the high road of illuminating; the beauties of the bye-ways we must leave to the writers of more lengthy treatises, amongst which may be mentioned Jewitt's "Manual," Warren's "Guide to Beginners," and the splendid works of Randle Harrison, ("Suggestions for Illuminating,") Digby Wyatt, and Noel Humphreys. Our "Hints" merely exhibit the best way of setting to work, and give a definite idea of what has to be done, by which we avoid the errors of inexperience, and much needless trouble.

To become a proficient, the amateur must have a real love for his art; he must do more than coquette with it because it is a fashion; he must make it at once his study and his pleasure; and, above all, he must be patient. He must not be disheartened at a few failures, nor expect to stand at the top of the hill without toiling up the ascent. He can only avoid doing wrong by careful examination of what he has done wrong, and by avoiding the error in future.

Young illuminators would do well to begin with some outlines, which may be purchased partly coloured by hand, to be completed as an exercise. They teach well the different modes of producing effects with colour; the author has seen some well adapted to the purpose, by Albert Ludovici, and by Victor Touche: they can be had plain, colouring commenced, and finished. The novice had better commence with a set of scroll designs, because, should one or two be spoilt at first, they can be thrown aside without much loss. He may next proceed to Warren's "Promises of our Saviour."\* The advanced artist will find the "Beatitudes," by Ludovici, and the outlines that accompany Milton's "Hymn of the Nativity,"\* more suitable.

After the practice obtained by colouring the outlines referred to, beginners should copy good models, choosing at first those of an early period, as the seventh century. They are easy to copy, as they require no knowledge of figure drawing or of drapery anatomy: but require great neatness of execution.

In copying, the outline should be drawn in with as light a touch as possible, especially where vellum is employed. The following directions may assist the less practised artist in obtaining

\* Now out of print, but many new subjects, the "Parables of our Lord," by Victor Touche, and the "Miracles," by the same artist, are somewhat similar.

an accurate copy: first, measure the size of the page to be copied, and rule lines to enclose a similar space; then measure the size and distances of the margin, text lines, border, miniatures, and so forth, as the case may be, and rule them in very lightly. Where a page contains more than a few words, the text should be got in very neatly, first in pencil, and the lines gone over with a lithographic pen charged with indelible brown. In copying the illuminated work, the easiest way is to fix the eye on some prominent point of the initial, border, etc., as the case may be, and to mark a corresponding place on the vellum with a pencil dot, repeating the process with the next prominent point, and so on, till all the most important parts are fixed in their relative places. - Having connected these with fine pencil lines, fill in the details. Here much assistance is obtained by ruling a few very fine diagonal lines and tying a thread of silk across the corresponding parts of the original. Lastly, if not satisfied with the copy, take a tracing from it, and test its accuracy by placing it over the original. By this means errors may be corrected which would otherwise remain undiscovered.

In this way, tolerable correctness of eye and command of hand may be attained. But there is no royal road to these; they can only be attained



by practice; by careful practice in copying good models. The swift pencil must at first be slow, or slovenliness is the certain result.

When the student is well acquainted with a style, he may adapt it to original designs; omitting or softening the defects of each period, but always retaining the *principles* on which the combination has been founded. Intricate original designs should not, in our opinion, be attempted without some knowledge of the rudiments of perspective,—a knowledge of what is necessary in portraying the flowing outlines and the harmonious curves on which the beauty of illuminated work so much depends.

In original designs, select a period or a style, and do not mix it. If its leading features are not adhered to, the harmony of the composition will be destroyed, and the finished work may look as though it had been begun in the nineteenth century, and brought to an end in the twelfth. In the same way do not mix conventional forms and natural ones. Each has its charms, but they are incompatible. Avoid copying conventional forms for quaintness' sake, or eschewing them because they are quaint. Quaint and impossible as are the foliage and animals of the middle ages, yet they have an adaptation to their purpose, and a

form and expression, which suit them to the place they occupy. We have no room to enter into a defence of conventionalism here; suffice it to say, that true illumination is the ornamentation of letters; and letters being but conventional forms of sounds, have, as it were, a sort of right to be conventionally decorated.

In designing initials, the first consideration is legibility. However elaborately they may be decorated, they must read at the first glance. In coloured letters the legibility is best insured by keeping to a decided and prominent colour for the body of the letter, which should contrast strongly with the prominent colours of the ornamentation.

The fillings in of initials are endless in their variety; good outlines may express the vigour of the drawing, and the elegance and harmony of the design; but for the thorough understanding of the delicacy of finish of details, and the charm of well-developed colour in illuminating, the originals must themselves be consulted.

In designing borders, we must first be well acquainted with the period followed. It would require a volume to dilate on various borders; whether we take the seventh century, with its endless interlacements, or the tenth, with its square, heavy foliage, or the thirteenth, with the graceful sweep

of its waving and curling stems. Several bits of borders, mere ideas, are given in our plates, and may, occasionally, be found useful for adaptation.

In illuminated work of the thirteenth and fourteenth centuries (the period to which we more especially direct attention,) the backgrounds are either raised and burnished gold or diaper work. Several specimens of diaper work are given in our plates, accompanied by instructions for colouring. Diapers, to be effective, must be very carefully drawn. Sometimes the background is checkered with square, sometimes with diamond (lozenge) shaped checks, coloured and gilt alternately, and re-outlined in black. The coloured checks are mostly enriched with white dots or patterns, as the fleur-de-lis.

In designing figures, groups, and drapery, a thorough knowledge of drawing, in the highest sense of the word is required. It is impossible, in this short epitome, to enter into the subject of figure drawing. We may hint, however, at the care that is required in the production of heads, hands, and feet, and the tenderness required in colouring flesh. If these are not scrupulously studied, no amount of care bestowed on the rest of the figure will make it look well. On the other hand, clever and careful extremities and faces will hide a multitude of sins.



The size of the initial letters and of the miniatures should have reference to the size of the page and to the importance of the subject; the size of the small text should have reference to the quantity of the subject matter, always leaving a large margin, which shews off the work to advantage. No precise rule can be given for harmonising details, ornaments, etc.: it is entirely a matter of taste and judgment.

The shape of the page must be considered. The page is almost always rectangular; the lines of the writing must therefore be kept square and parallel to each other, and some of the dominant ornamental lines and borders must be kept parallel to the sides of the page, or we shall get a straggling, untidy appearance.

The most difficult part in designing is the arrangement of colours; it requires the greatest judgment, experience, and taste. The beauty of many of the old illuminations depends on the wonderful eye for colour enjoyed by the artists of the period. This point is so important that, at the risk of being thought too elementary, we must devote a paragraph to considering the harmonious relations of colour.

It is well known that there are three primary colours, so called because they cannot be produced by combination, viz., yellow, red, and blue. Se-

condary colours are produced by mixing two primaries; the secondaries being, orange (red and yellow), green (blue and yellow), and purple (red and blue). Tertiary colours are produced by mixing two secondaries; the tertiaries are citrine, (orange and green), olive (green and purple), and russet (orange and purple). The *hues* of all colours may be lightened into *tints* by the addition of white, and deepened into *shades* by black. It must be understood that this is the theory of colour, and applies to absolute colours. As the colours we use are not nearly absolute colours, we must practically proceed as our imperfect means allow. Thus, absolute red would be deepened into shade by absolute black; but vermilion and lamp-black would make red mud, neither being absolute; and in practice we shade with browns, etc. The presence of all three primary colours, pure or in combination, is necessary to satisfy the eye, and to *produce harmony*. To produce perfect harmony they must be in certain saturating proportions, which for absolute colour are three of yellow to five of red and eight of blue. Since red harmonises with green, green is said to be *complementary* to red, and so on; purple is complementary to yellow, and orange to blue. In the same way any two secondaries harmonise with their third. In hue, yellow is most

allied to light, purple to dark; yellow and its complementary contrast as to light and dark. Red is most exciting and positive; green is grateful and soothing. Red, then, and its complementary, contrast as to power of colour and of exciting the eye. Blue, again is the most cold and retiring, and it contrasts with its complementary, orange, which is warm and advancing. The union of the primaries neutralises colour, hence tertiary hues are frequently called *neutral*. By mixture of any two primaries, in any degree, beauty is correspondingly lost; and to harmonise and restore the equilibrium, the remaining primary must predominate in the harmonious complementary. Thus, the true complementary of scarlet (which is an orange red) must incline to blue and be a blue green.

These remarks suppose that we are dealing with pure colour, as that of the rainbow. But in artificial colouring considerable license must be allowed to what, for want of a fonder explanation, is called taste. In the present state of science, no one can say what is, or what is not, correct in colour. A certain boldness (or departure from rule) in colouring is often productive of a pleasing effect, just as discords are agreeable in music. As a rule, whatever looks right is right, without reference to scientific formulæ. For example, gold har-



monifes with all colours, and yellow with but few.

Laftly, in conftituting any design, always have a good *reason* for introducing any ornaments. Let there be a general purpofe and a meaning in every detail; an endeavour to carry out fome idea; confidering, firft, what is to be conveyed, and, fecond, how to convey it. Thus, the design will acquire unity and completeness, which will be wanting in one worked out at random, or only becaufe it looks pretty. Unmeaning prettinefs is the rock on which moft modern illuminators founder.

RECAPITULATION.

We will now fum up the method to be followed, the chief points to be kept in mind, and add a few general obfervations:

1. Practife colouring and become familiar with its harmonies by filling up printed outlines.

2. In the fame way, practife drawing by copying the beft acceffible models; and when up in a ftyle, endeavour to adapt it to original compositions. Although in the periods of pure illumination we have mere furface decoration, without any attempt at imitating folidity by means of caft fhadows, yet a knowledge of perspective is a great help. In original designs, never work at random, but try to have a *reason* for every ornament.

3. Outlines must be drawn with the utmost care and delicacy, keeping in view the graceful and harmonious sweeps of the longer curves, the vigour and decision of the shorter ones, and the crispness and freshness of every, even the smallest detail.

4. The parts to be gilt are to be prepared and finished before laying on any colour, except in the case of illuminations of a late period, where streaks of gold are found painted over the colour. This however, is not gilding; it is painting with gold.

5. Backgrounds, in the best period of illuminating art, are flat diapers or raised burnished gold; the pattern, if any, on gold, being drawn with a bold and fearless hand, and the diapering being most carefully drawn in white, on the flat ground, with a very small brush.

6. The stems of double-lined ornaments should always be tinted. This is effected by laying on the colour flat, and, when dry, going over, with the same colour lowered with white, those parts on which white lines or patterns are finally to be drawn.

7. Drapery, borders, foliage, details, etc., endless in their variety and treatment, must be studied from the MSS. themselves. It is only by a study of the originals that we can understand what is meant

by delicacy of finish and well-developed colouring; the harmonies of curves and details; and the relative sizes (or scales) of the various ornaments.

8. Re-outlining, or putting on the black outline after the gold and colours are finished, requires a firm and steady touch. The finished appearance of the painting depends much on the care taken with these lines.

9. Colours must be kept as pure in tint as possible, and must be arranged harmoniously; but the strict canons of theory are not to be slavishly followed to the exclusion of individual taste.

10. Lastly, we must love our art; we must practise patience and self-denial, thoughtfulness and delicacy; we must be prepared for failures and mishaps; but we must not be disheartened; we must return again and again to the contest, and we shall eventually rise triumphant above our discomfitures. Our reward will be in the contemplation of pages of our own handiwork, resplendent with gold and colours—the cynosures of our libraries or of our drawing rooms.



## CHAPTER II.

## MATERIALS.

WE have now to consider the practical part of our subject: the choice of materials to work on and with, and how to use them.

The best surface for illuminating on is vellum. Vellum is very durable, and it enriches the work by its charming colour and texture. It is more costly than paper, and requires much more care in handling, as the slightest speck of dirt shows, and is not easily removed. Vellum, too, has a slight greasiness, and to the novice, is not very easy to colour on; but this difficulty may be entirely removed by washing the surface with very dilute liquid colourless ox-gall. In using vellum, the design should be first got out on paper, and the outline be very lightly touched-in on the vellum with an HB pencil cut to a very fine point. The sketching-in requires great care, for it is almost impossible to remove pencil-marks from vellum. India-rubber should never be used. Bread, not too new, may be sparingly employed. Marks may

be got out with very fine glafs paper, or be painted over with Illuminating Body White or body colour, where the ſubject admits of it. The ſolid blocks of vellum fold by artiſts' colourmen are convenient, as they ſave the trouble of mounting, but they will not do for burniſhing on. In mounting vellum, it ſhould not be wetted much, but juſt damped by laying it in a damp cloth. The yellowiſh hue of vellum requires that white ſurfaces ſhould be coated with Illuminating Body White, and the ground tints ſhould be moſtly mixed with white, to give body and ſolidity. The exceptions are mentioned in our memoranda of hues.

We recommend beginners to make their trials on paper. Papers properly prepared for taking water colours are to be got at all the colourmen's ſhops: the cloſer the texture of the paper is, the better. We have ſeen a very cloſe-grained paper with a vellum ſurface that has only juſt been brought forward. We can recommend this Vellum Paper ſtrongly. Paper is very good for learning and practiſing on, but important efforts ſhould have the advantage in tone and effect that vellum alone can give. We venture to affirm that thoſe who once ſucceed on vellum, or vellum paper, will diſcard drawing paper and Briſtol board for ever. All vellum or paper once mounted ſhould be capped

with a paper cover fitting the drawing-board, and having a hole cut where required for working. Vellum especially should be uncovered as little as possible.

In tracing, only the necessary or guiding lines should be drawn on the transparent tracing paper, otherwise much confusion ensues; besides, no end is achieved by marking the position of lines which can be put in with a brush and colour at once by the eye—but rather harm, as often a black mark is transferred which is found afterwards to mar the effect of the finished painting. In using the black-lead paper, never press the finger on it, but cover it with a card, on which steady the hand.

The best brushes are made of sable hair,—the brown hair being preferred. Those which are mounted in metallic ferrules are the best for all delicate work, as they are firmer in use; they are not more expensive than the quill brushes, for they last so much longer. Numbers 1 to 8 are sufficient—one large one in quill, and two good camel-hairs both pretty large, with one flat brush for washing large surfaces with ox-gall, body-white, etc. It is a good plan to have brushes for each set of colours,—one or two for reds, one or two for blues, etc. It saves much needless washing, which, after all, must be more or less imperfectly



performed. One or two of Gillott's architectural and lithographic pens will be found useful in drawing fine lines.

In choosing colours, those only should be used which are permanent, and they should be purchased of a first-class house. An ordinary box of colours, if good, will do very well; but as more depends on the quality of the colours than on any other feature, we recommend you to get the most colours prepared expressly for Illuminating by Messrs. Barnard & Son, of Oxford Street. They are certainly the best; for they have a brightness of tint, and a freedom in use, which we have not found in those of any other makers; they also give out a great volume of colour, and adhere tenaciously to the paper or vellum.

In these few pages we shall attempt to give but the broadest idea of the uses of various colours. The author has found that book directions respecting colours are seldom satisfactory, and he advises the beginner to mix and mix till he hits the required hue; the most pleasing and suitable being noted for future use. It is a little troublesome, but it is the only way for the individual to succeed well. Beginners must not expect to match the colours exactly at once. Unmixed colours are always the brightest (for reasons, see our observations on the

harmonious relations of colour), and it follows that the fewer the number of colours mixed to obtain a tint, the brighter it will be.

Rich, deep, compound colour is best produced by mixing transparent and opaque; two transparents generally mixing with a weak tone; two opaques with a heavy one.

Opaque colours are those which, when painted over another colour, hide it completely; such are vermilion, emerald green, and yellow ochre.

Transparent (or as they are sometimes called, glazing colours), when painted over other colours, shew the first tint through, and produce a mixed tint; such are carmine, the madders, and Vandyke brown. Some colours are only transparent when used in very thin coats; these are called semi-transparent; such are Indian yellow, light cadmium, yellow, and cobalt. All transparent colours can be rendered opaque by mixing them with Illuminating Body White. Except for glazing, all colours are used opaque in Illuminating; the colour being laid on flat, and the lights and shades afterwards introduced.

Colours should not be applied thick at first, or they will not dry evenly; they should be applied thinly, and the surface gone over several times. To ensure clearness and brilliancy of tints, they

should be re-touched as little as possible; above all, they should never be re-touched or corrected while drying, as they thus become streaky and muddy, which is fatal to the purity of colour for which illumination is famed. In painting different tints over each other (glazing), water-colour megilp is very useful; it fixes the colour so that it may be washed over freely, and it increases the depth and brilliancy of the colours, so necessary for illuminating effect, without glazing them so highly as gum. Water-colour megilp is also very useful for casing fugitive colours. We use fugitive colours as little as possible; but where we can find no substitute we must employ them. If they are coated when dry with the water-colour megilp their durability is much increased.

When mixed colours are employed, be careful to mix up as much as may be required for the work in hand; for, if a second quantity has to be made, it will differ in tone from the first, and produce a patchy appearance in the work.

And here, perhaps, is the proper place to notice the more important colours and some of their peculiarities and combinations.

Indian Yellow is a bright yellow, light in tone, semi-transparent, and useful for glazing. It should be used instead of gamboge, being more permanent;



mixed with white it gives a vivid, opaque, primrose yellow.

Cadmium Yellow is a semi-opaque, rich, glowing yellow. It is prepared in two forms, cadmium yellow and light cadmium yellow (the primrose). The primrose light cadmium quite supercedes lemon yellow. Cadmium yellow tones well with white. With carmine it forms a rich, glowing, warm orange; with a little cobalt or French ultramarine it gives a high-toned, semi-transparent green; with excess of cobalt or French ultramarine it gives a low-toned green. These greens are only effective when made with the light cadmium yellow (primrose). With a small quantity of purple madder, or of Indian red, the cadmium yellow makes a fine, rich, warm yellow-brown, and with a very little burnt carmine it gives a buff-yellow

Yellow Ochre is a dull, opaque yellow, not easy to work with. It may be *very* sparingly mixed with shell gold to produce the effect of the old illuminated dull gold. Ochre, if used as a yellow, does not mix well with white; the mixture produces a stone-coloured drab.

Carmine is a rich, deep-toned, glowing, transparent scarlet crimson. Its brilliancy is much increased by laying it over a ground of Indian yellow. If the carmine is thinly applied as thus directed, it

obtains a very brilliant orange-red appearance. It is best to interpose a layer of water-colour megilp. Carmine and lake are not absolutely permanent colours; but we have no substitute for them. Lake is said to be the more permanent, but, we think, if the carmine is really good, incorrectly; lake has a purplish tinge. Most pink reds are obtained with carmine or lake, paled with Illuminating Body White, or diluted with water. With French ultramarine and carmine we get a rich warm purple.

Crimson Lake may be sometimes substituted for carmine. It has a bluer tint, and is, erroneously, as we believe, said to be more permanent.

Vermilion is a dense, deep-toned, opaque red.

Royal Scarlet is very brilliant and powerful. It will not keep moist in tubes, and care must be taken that it does not touch metal. It must, therefore, be used with a quill brush. This colour should be little used, as it is fugitive. Indeed it only deserves notice on account of its brilliancy and purity, and because we do not know any real scarlet which is permanent. If well cased in water-colour megilp, it may be made to preserve its colour for many years.

Cobalt is a light-toned, semi-transparent, bright azure blue; it wants the fulness of body of French

ultramarine. Cobalt mixes in almost any proportion with white, which of course renders it opaque; with rose madder or with purple madder it makes a rich cold purple, or a rich warm purple, if the madder is in excess. With madder brown it gives a grey lilac.

French Ultramarine wants the delicacy of genuine ultramarine, but equals it in most other respects. It is very deep and rich, and mixes with white. The addition of a very little indigo or Indian ink renders it deep and dense. With rose madder and white, or with burnt carmine, it makes a rich purple; a cold purple if the blue predominates; a warm one if the madder or carmine is in excess. In mixing purples the required change is often produced by adding a very little red to a blue, or *vice versa*. French ultramarine makes a high-toned semi-transparent green with Indian yellow.

Deep Cadmium is a fine, permanent opaque orange, and is a better substitute for the red lead of the old illuminations than any other colour; though orange chrome which is not permanent, is preferred by some.

Indian Red is an opaque, rich, deep-toned purplish red. With carmine it gives a useful russet red; with a little cadmium it produces a yellow

brown. With white it gives a rich, opaque, pinkish red. It is quite permanent.

Raw Sienna is a rich yellow brown.

Burnt Sienna is a reddish brown, approaching deep orange. Dragon's blood is a similar colour, but redder and brighter.

Burnt Carmine is a rich, deep-toned, warm marone. It is very useful in shading gold.

Emerald Green is extremely vivid and high-toned. It must be mixed with white to produce some of the effects in old illuminated work.

Vandyke Brown is a deep, rich, pure, transparent brown, luminous and clear in tint: it is the most useful illuminating brown. Mixed with carmine it makes a chocolate red; with a little burnt carmine or madder brown, it makes a rich warm brown. With a glazing of Indian yellow, we get a warm brown. With white, it gives a stone drab.

Madder Brown is also a deep, rich brown, used in veining, shading, and deepening parts that require relief.

Purple Madder is a rich warm purple.

Rose Madder is a bright, transparent pink. We substitute this, or madder lake, for carmine, whenever practicable, as, in common with all the madders, it is quite permanent.

Raw Umber is a cold dirty brown; much diluted,



it may be used as a wash for tinting mediæval flesh; a very small quantity of cobalt renders it more pleasing.

Indian Ink is really a sepia; an intensely dark brown, approaching to black. The cheap Indian inks are worthless; that which has a sepia tint is the best. Indelible Brown has a similar tone, and flows very freely from the pen. It can only be obtained in the liquid state. It will be found of great value for drawing-in delicate outlines, as it can be reduced to any tint with water, but when once dry it is unaffected by washing.

Ivory Black and Lamp Black are quite free from any shade of brown or grey. The addition of a little indigo renders them, as also Indian ink, more intense. Re-outlining should be executed with one of these blacks. Ivory black is the richest; lamp black is the pleasantest to work with. They require to be worked with thin gum-water, to give the blacks a brilliancy like that of the old MSS.

Illuminating Body White is used for toning down and for tinting. It quite supercedes Chinese White and Constant White; it is less cloggy, and is better for producing clear, fine, white lines, or patterns on coloured grounds. It also renders colours opaque, and capable of giving a clear, solid appearance. It is sold only in bottles, and as there

are many other preparations, it is important to get this particular White. It should be diluted for use with pure water, and left for a few minutes before using. Greys are obtained by mixing Indian ink and Illuminating Body White. For pearly greys, a little cobalt may be added; for slate greys, a little Indian red and cobalt may be added; for silvery greys, a little cobalt and rose madder. Payne's Grey is a useful dark neutral tint; ultramarine ash is a light blue grey.

Let us now tabulate our colours and tints, for convenience of reference.

## TABLE OF COLOURS AND TINTS.

### YELLOWS.

*Bright and semi-transparent.*—Indian yellow.

*Vivid, opaque, primrose yellow.*—Indian yellow with white.

*Rich, glowing yellow.*—(Light) Cadmium yellow, No. 1.

*Rich, glowing yellow, with tinge of orange.*—Cadmium, No. 2, or deeper, No. 3.

*Dull, opaque yellow.*—Yellow ochre.

*Buff yellow.*—Cadmium Yellow, with a touch of Burnt Carmine.

### REDS.

*Rich, deep, glowing, transparent scarlet crimson.*  
—Carmine.

*Deep, dense, opaque red.*—Vermilion.

*Bright, transparent pink.*—Rose Madder; Rose Madder with a little Carmine.

*Bright opaque pink.*—As above, with addition of White.

*Chocolate red.*—Vandyke Brown with Carmine.

*Opaque, rich, deep purplish red.*—Indian Red.

*Russet red.*—Indian Red with Carmine.

*Rich, opaque, pinkish red.*—Either of the last two, much paled with White.

#### BLUES.

*Light, semi-transparent, bright azure.*—Cobalt.

*Light, opaque, bright azure.*—Cobalt with a little White.

*Deep, rich blue.*—Ultramarine; French Ultramarine; either may be used, with or without White.

*Deep, dense blue.*—Ultramarine, with a little Indian Ink or Indigo.

#### ORANGES.

*Rich, warm, glowing, opaque yellow orange.*—Deep Cadmium.

*Very brilliant, transparent red orange.*—Carmine, over an Indian Yellow ground.

*Rich, glowing, warm, semi-transparent orange.*—Cadmium Yellow with Carmine.

*Brilliant and powerful scarlet.*—Royal Scarlet; Pale Vermilion.

PURPLES.

*Rich, cold violet, or lavender purples.*—Cobalt, with a little Rose Madder, or with a little Purple Madder; Ultramarine, with White and a little Rose Madder; Ultramarine, with a little Burnt Carmine.

*Rich, warm puce, or marone purples.*—Purple Madder; Burnt Carmine; Ultramarine, with Carmine or with Burnt Carmine; Rose Madder with a little Ultramarine, or with a little Cobalt.

*Greyish lilac.*—Cobalt and Brown Madder.

GREENS.

*Vivid, high-toned, opaque green.*—Emerald Green; Emerald Green with a little Light Cadmium Yellow, No. 1.

*High-toned, semi-transparent green.*—Light Cadmium Yellow, No. 1, with a little Cobalt or French Ultramarine; Indian Yellow, with a little Cobalt, or with a little Ultramarine.

*Low-toned, semi-transparent green.*—As above, with excess of blue.

*Dull, opaque green.*—Oxide of Chromium.

BROWNS.

*Deep, rich, pure, transparent, clear and luminous brown.*—Vandyke Brown.



*Rich warm brown.*—Vandyke Brown, with a little Burnt Carmine, or Madder Brown.

*Rich, warm red, or yellow brown.*—Indian Red, or Purple Madder with Cadmium Yellow; either being in excess, as red or yellow is wished to predominate.

*Stone drab.*—Vandyke Brown or Yellow Ochre, with White.

*Rich, yellow brown.*—Raw Sienna.

*Rich reddish brown.*—Burnt Sienna; Dragon's Blood.

#### BLACKS.

*Dense.*—Ivory or Lamp-black.

*Brown black.*—Indian Ink (the best only); indelible Brown.

#### WHITE

*Pure.*—Illuminating Body White.

#### GREYS.

Various proportions of Indian Ink and White.

*Pearly grey.*—The above, with a little Cobalt.

*Slate grey.*—The above, with a little Indian Red and Cobalt.

*Silvery grey.*—The above, with a little Rose Madder and Cobalt.

## CHAPTER III.

## GILDING.

BEFORE any colour is applied, it is requisite to introduce the gold or silver in early illuminated work. All solid metallic, and especially burnished surfaces, must be begun and finished after the outline is sketched in, and before colouring is commenced. For, in gilding and burnishing, the coloured surface is sure to be damaged. In illuminations of a late period, there are often touches and streaks of shell gold painted *over* the colour.

The following observations are applicable to gilding and metallic ornamentations of all kinds; they have a special interest for the illuminating artist, whose gilding operations are beset with peculiar difficulties. Indeed this part of illuminating work is less understood than any other; we are, therefore, somewhat diffuse in our directions.

Among the losses we have had to deplore is the loss of the art of durably burnishing gold on vellum (and paper), and particularly of imitating the raised gold ornaments which adorn the old illuminated manuscripts. The public has, *over* and

over again, called for some means of adequately representing these ancient models. But there has prevailed a unanimous feeling among practical and scientific men that there is nothing they can recommend, though artists' colourmen do mostly supply some preparation which they produce as the best thing for the purpose.

Let us just see what are the obstacles to be overcome. Firstly, the dirt, smell and mess of ordinary gilding must be removed, in order to convert it into a drawing-room amusement. Secondly the preparations used in common gilding very soon spoil, and a composition has been wanted that would keep any length of time. Thirdly, illuminated work being on a material like paper or vellum, is bent about and often roughly handled. A great stumbling-block has been to find a preparation that will not crack off. Fourthly, the composition must harden sufficiently to take a good burnish, and yet be capable of receiving a pattern when indented. Some preparations for raising gold are sold in pots by Messrs. Ackerman, Barnard, and other artists' colourmen; but the illuminating gold size, as it is commonly called, will not harden sufficiently to take a burnish. Fifthly, for general use it is highly important that the composition should give but little trouble on its application.

We believe that these difficulties are completely overcome by the Mediæval Gold Body,\* a preparation lately introduced by Messrs. Barnard. The Mediæval Gold Body has no offensive smell, makes no dirt, will keep any length of time, will not crack off paper or vellum, when bent or roughly handled; enriches the gold, whether mat or burnished, flat or raised; will take a pattern and a very brilliant burnish; and can be very easily used, either with a pen or with a common brush. The Gold Body is made in two forms:—No. 1, being of a thicker consistence, for raised ornaments, and No. 2, of a thinner quality, for flat ornaments.

The directions now given are founded upon our own practice. The surface to be gilt should be moderately rough to hold the Gold Body firmly. If, for instance, hot-pressed paper is used, the surface to be coated should first be roughened with a penknife or an ink eraser. The surface should then be coated with the Gold Body by means of a camel hair pencil, in exactly the same way as liquid water-colours are used, first stirring or shaking the bottle to free from lumps. Thin coats should be crossed in different directions over each other, taking care

\* We find our opinion of the merit of this invention sustained by Mr. H. Noel Humphreys (who says that "he considers it superior to any other preparation of the kind"), Mr. Albert H. Warren, Mr. Randle Harrison, and other eminent illuminators.



that each coat is dry before another is applied. For flat ornaments, one, two, or even three coats of No. 2, should be laid on; for raised ornaments, as many thin coats of No. 1 as will raise the work sufficiently. The raised effect in old manuscripts, though due partly to the thickness of the body employed, is heightened by the cockling of the vellum. To get a very true raised surface, lay on first a coat of No. 2, then several coats of No. 1, and when dry, rub the surface with a piece of the finest glass or emery paper, or scrape it carefully with a knife, and finish by passing a large, stiffish, wet camel-hair brush several times across the surface, which will remove enough of the Gold Body to get out the fine scratches left on it by the glass paper,—for burnished gold the surface is now ready, and only requires further wetting if leaf gold is employed (*vide* directions for leaf gilding). For mat gold, the surface freed from scratches must be allowed to dry completely, and must then be polished with a piece of fine linen covered smoothly over the finger. \* It is then ready to receive the gold, being first wetted, if leaf gold is used (*vide* directions). If the surface is polished before applying the gold, it will not burnish so well as that which is left unpolished as above directed; for the burnishing stone bites the surface thus left, whereas it slides over

a polished surface, and does not produce so brilliant a result. Care must be taken not to lay on the coats thick, or the surface will honeycomb, and the Gold Body will be liable to crack off. The surface should be lightly and rapidly gone over with the brush not too full, and the coats must not be disturbed or re-touched while drying, or the beautiful smoothness of the surface will be destroyed. We attribute the durability and smoothness of the old illuminations to the care that was taken in preparing the ground.

The Gold Body holds so firmly that it is difficult to take it off. When applied in error it may be scraped out as cleanly as possible with a penknife, and the place be covered with Illuminating Body White.

If the Gold Body is not in daily use, it should be kept tightly corked and inverted. This precaution is necessary, as the composition dries up very easily. We would not advise the illuminator to attempt to work up Gold Body after it has become dry. It is a pity to run the risk of spending much labour on a painting, and then to find that the Gold Body peels off, or will not stand burnishing, as we have known to be the case.

As soon as the space is prepared, and the composition is *thoroughly dry*, it may be gilt by painting

it over with shell or saucer gold in the usual way. The ground prepared with the Mediæval Gold Body gives a rich tone to the gold and economises it. Indeed, the thinner the gold is painted on, so as to cover it, the better will be the effect. For dull gold, one coat of the shell gold is sufficient; for burnished gold, two thin coats of shell gold crossed over each other. If a great thickness of gold is applied, it will most likely frizzle in burnishing.

When the gold is dry, rub the parts to be burnished with the flat side of a claw-shaped burnishing stone, placing the vellum or paper at the same time on some hard, smooth surface, such as plate glass. It is a very good plan to mount the vellum or paper by gumming it on the back of a slab of plate glass, rounded off at the edges. This makes a capital drawing-board, and there will be no occasion to remove the drawing for burnishing.

The choice of a good burnishing-stone is all-important, and it is not easy to meet with one that fulfils every requirement. It should be made of flint, not agate; it must be quite free from angular facets; it must have a round prominent heel, and a flattened point. It should have a broad base, to enable it to bear pressure, and should be set in a substantial handle. The small cornelians sold by

most artists' colourmen, though very pretty to look at, are for all practical purposes of but little use. Their polish is too high, in consequence of which they cling to the gold and strip it off. They are absurdly small, and are set in correspondingly small handles; and we have examined many, but never found one free from facets or similar defects. Our remarks must be understood to apply to claw-shaped stones, and not to the pointed agates for dotting or drawing lines on the gold. We have explained this matter to Messrs. Barnard, and, owing to our suggestion, they have had some select burnishing stones manufactured. The illuminator who is so fortunate as to have a really good burnishing stone possesses an amulet with which he has already overcome half his gilding difficulties.

When silver is used, it may be treated in the same way; but after thoroughly drying (or, if burnished, after burnishing), it should be lightly and rapidly covered with a very thin solution of isinglass. The silver is not left quite so bright when thus treated, but it preserves its colour as long as the varnish remains unbroken; but if left exposed to the air, it soon tarnishes. In purchasing shell silver, it is necessary to get it quite fresh and before it has begun to tarnish. Platinum and aluminum are used as permanent substitutes for silver, but



their tone is very different. Platinum is the nearest approach, and is quite permanent; we advise the use of platinum, shell or saucer, in preference to silver or aluminum. Aluminum looks very well, but it is not certain that it will stand.

There is some little art in burnishing. It is soon acquired; but, without it, the best prepared body will fray, or the gold strip off. Novices in burnishing are recommended to press the forefinger firmly on the stone, to move it very evenly, and only to burnish in one direction. Firm, rather than very hard, pressure is required.

After burnishing, patterns may be ruled, drawn, or punctured on the surface without injuring it. The effect is greatly to enrich the appearance. If the so-called punctures, which are, in fact, indentations, are produced with a pointed burnisher, all the little dots decompose the light, and sparkle like diamonds, showing the prismatic colours. The effect when the gold is freshly punctured is inconceivably brilliant. Pointed agates are sold for this purpose.

To produce the solid, brilliant effect of the old illuminations, there is no substitute for leaf gold. On comparing shell and leaf-gilt surfaces, the superiority of the latter is at once apparent. But leaf-gilding is a troublesome process, and cannot

be successfully managed without patience and practice. Personal instruction is the quickest road to success. One can hardly expect the public generally to patronise leaf-gilding; but having professed, as far as lay in our power, to exhaust the subject, we do not feel justified in leaving it here. For leaf-gilding, then, it is necessary to procure a gilders' cushion, several camel-hair tips, a gilding-knife, a faulting pencil, and a book of leaf-gold. These can be obtained at any shop where gilders' materials are sold. The ordinary leaf-gold is alloyed with copper and silver, and does not give the pure yellow tone required in illuminating. Owing to our suggestion, fine gold, beaten into extra thick leaf, especially for illuminated work, can now be obtained. It is expensive, but, in our opinion, is the only gold worth using. Take care that the articles above mentioned are kept dry. If the cushion is new, the leather requires preparing by rubbing a lump of ochre across it, or dusting it with plate powder, afterwards turning the cushion upside down, and knocking it to remove superfluous dust. The gold leaf will not then stick to the leather. Drop a leaf of gold from the book into the space on the cushion, which is protected from currents of air by a parchment border, and with the dry knife toss the leaf

gently about on the cushion till it settles nearly flat; then blow (not breathe) gently on the leaf, to flatten it more completely, without moistening it. Measure with the eye the size of the bit of gold leaf required, and cut it on the cushion with the gilding knife. The gilding knife should have a perfectly even edge, and be just sharp enough to cut the leaf without cutting the cushion. If the knife is new, or if it has been lying by for some time, it must be dressed by rubbing well with a leather primed with rouge, to ensure the evenness of the edge. If it is in the least notched or uneven, or if the blade is greasy or rusty, it is quite unfit for use. Next, the surface prepared with the Gold Body is to have a wet hair pencil run over it. This is a part of the operation which requires some little management, or the gold may rub off in bur-nishing. We will suppose that the surface has been prepared by rubbing with emery paper, and has but a few slight scratches left on it. The wet camel's hair pencil should be rubbed over it till the scratches are rubbed out. This raises enough of the Gold Body to make the water turbid. Then water enough should be added to make it stand glossy on the surface, or live. While the water is still live, with the camel-hair tip lift the bit of gold leaf already cut, and float it very gently on the wetted place.

However uneven the leaf may look, it should not be touched or pressed down; it will lay itself smooth. Should, however, any portion—such as a corner of the leaf—be standing up, and manifestly not touching the water, lay it gently towards the water with the dry faulting pencil, but do not press it down; as soon as it touches the water it will lay itself. In lifting the gold leaf with the tip, it is necessary to pass it several times across the face, which very slightly moistens the camel's hair, and at the same time disturbs its electrical equilibrium; so that when the tip is placed on the gold leaf it is attracted to the brush long enough for laying. If the tip is new, it should be placed flat between the face and the palm of the hand, and drawn smartly through them two or three times. This arranges the hairs evenly, and moistens and lubricates them somewhat. It is advisable to have several tips, a long flat one for slips of leaf, a semi-circular one, and a very narrow one for lifting little bits of gold. When the gilt surface is dry, dust off the rough edges of gold with the faulting pencil, and, when desired, burnish, as above directed. To get the most brilliant possible burnish, the gold should be burnished before the body is *quite* dry and hard. The exact moment when it is dry enough, so that the gold will not rub off, is only to be known by



experience. A few experiments will give the knowledge. For common purposes, it is recommended to leave the gold, till *quite* dry. If any holes show through the gold, either before or after burnishing, wet the surface again, and apply a piece more gold, with a margin larger than the space that is wetted. We have been told by several illuminators that they fail to make the gold leaf stick with water alone, and that they use very thin gum-water, or dissolve a few shreads of isinglass in the water. We can only say that we do not fail with water alone; but at the same time we see no objection to wetting with the above substitutes, provided they are used sufficiently weak not to interfere with the burnish.

Leaf gilding is an extremely delicate process, and the manipulations just explained require some dexterity. We meet with many disappointments before acquiring the necessary expertness, and we beg our readers not to throw leaf gilding up in despair, if they do not succeed the first time.

The leaf silver of commerce should never be used in illuminating. Silver is beaten as fine as gold; it is sold under the name of white gold. The white gold of commerce is, in reality, fine silver leaf. When white gold is used, it should be quite fresh and untarnished, and, after laying, it

should be freed from atmospheric influences, as before advised.

In course of time the silver will go, though protected by its isinglass coat. There are two permanent substitutes for silver, the merits of which we will now discuss. We allude to aluminum leaf and platinum leaf.

Aluminum is a metal which exists in the earth in large quantities; but owing to its being very strongly combined with oxygen, it is only very lately that chemists have been able (without incurring an expense which would render the metal unsaleable) to separate it in any quantity. Aluminum is now, however, an article of commerce; and since the former edition of this work was published, aluminum, beaten into leaf has been imported into London, and can be obtained at artists' colour shops and elsewhere. We have experimented with it, and certainly are pleased with the result. It lies best when floated on Illuminating Gold Size—not Gold Body,—thinned with much water, and mixed with a little carmine.

In lifting aluminum leaf, the tip must be well greased by rubbing it with a tallow candle. It must be laid in one piece and without wrinkles, for all joins show, and the wrinkles will not come out; and in handling, great care must be taken

not to tofs the aluminum leaf about more than is abfolutely neceffary, as the metal is very brittle.

Burnifhing improves the luftre of the metal, but we do not advife attempting to burnifh aluminum leaf. No doubt it will bear a little burnifhing, from a very fkillful hand, but it is fo brittle that but few would fucceed.

Aluminum has a dull leaden tone; it is, in this refpect, inferior to filver. It is not certain that aluminum will ftand; time alone can prove this; our experiments incline us to believe that it will, and fuch is the general opinion.

The filver effect is moft nearly imitated by platinum leaf, which has the advantage of being abfolutely permanent. The drawback to the ufe of platinum leaf is the coft of it. It is about forty times as dear as leaf filver, and ten times as expensive as leaf aluminum. Platinum leaf is much tougher and more manageable than aluminum leaf. Platinum leaf will bear burnifhing very well but hardly requires it, owing to its natural brilliancy. The direftions for laying aluminum leaf apply alfo to platinum leaf.

We believe that chemically pure tin might be beaten into leaf and ufed as a cheap fubftitute for filver. We have feen tin leaf, but it foon turns black, owing to the lead (?) with which it is alloyed.

We hope at some future time to be able to speak more positively on this point. We have thought it worth mentioning here, that the idea once started may have the opportunity of being ventilated by those who take sufficient interest in the matter.

To sum up ; silver should not be used in any illuminated work where permanence is desired, for even if cased in isinglass, it will turn black after a time, though we have seen some which has stood for sixteen years ; besides which, casing the metal damages the extreme lustre and brilliancy which characterises high-class illuminating. Aluminum is a very good substitute for silver, but has a leaden tone, is brittle, and will not stand much burnishing. Platinum is permanent, and has the requisite lustre, but is very expensive.

With this summary of the properties of the white metals, we leave our readers to choose for themselves, and we hope that they will find as much pleasure in making use of our experience as we had in collecting it.



## CHAPTER IV.

---

### DESCRIPTION AND EXPLANATION OF THE PLATES.

It will be understood by the student that the borders are to be drawn upon (or traced and transferred to) the material upon which he intends to work: the descriptions and instructions which follow will aid him in the colouring.

#### PLATE I.

THE elegant border surrounding the motto "Wisdom is better than Strength" is copied from a service book in the Harleian collection, illuminated in France about the year 1420. The colours employed are Carmine, Carmine and Body White, French Ultramarine, and French Ultramarine and Body White, Indian Ink and Gold.

#### PLATE II.

BORDERS of the twelfth century,—the two upper ones on the plate are well adapted for the sides of pages, placed outside after the text has been surrounded by either of the two small borders at the bottom of the plate.

#### PLATE III.

THESE beautiful borders may be varied in colour. Emerald Green mixed with Body White

may take the place of Purple for the background. In the border at the foot of the page Emerald Green and Body White may with advantage be substituted for the Dark Blue.

PLATE IV.

FIFTEENTH-CENTURY borders.—In the two blue ones Green or Light Pink (Carmine and Body White)-may be substituted for Light Blue.

PLATE V.

PORTIONS of illuminated borders from a MS. in the British Museum. The prevailing colours are Pink (Carmine), Blue (Cobalt or French Ultramarine), Red (Vermilion), and Green (Emerald); Body White being used with all of them except the Red.

PLATE VI.

THESE borders exhibit that very elegant style prevalent in the Saxon MSS., written in the latter part of the tenth century. Very splendid examples may be seen in the illuminations of the Duke of Devonshire's Benedictional, engraved at the expense of the Society of Antiquaries. The colours generally employed are Pink, Blue, Red, and Green; the grounding Gold, outlined with Black.

PLATE VII.

THE examples on this plate are from a beautiful psalter illuminated about the close of

the thirteenth century. The ground should be Gold, outlined with Black.

#### 'PLATE VIII.

THE ornament at the top of this page is from a MS. of the middle of the fifteenth century in the Harleian library, illuminated in Italy, where, at this period, there existed a school for writing and illumination. The lower ornament is a portion of a border from a psalter of the fifteenth century; a superb example of the period, the relative proportion of solid and open work producing an exquisite effect of richness and variety, each feature growing out of the other, producing a completeness of design seldom met with in more modern works, and forming an excellent study for the ornamental designer. It is a style developed in England during the latter part of the reign of Henry VI. and is common in works of that period, when a great taste for enriched books of devotion existed.

#### PLATE IX.

THIS style of ornament is found in works of the fifteenth century; conventional ornament intermingled with natural flowers arranged in a fragmentary manner is its prevailing characteristic, continuity of design being abandoned.

## PLATE X.

THIS design is arranged after the style of the very highest class of Parisian art of the early fourteenth century.

The primary point to be attended to in colouring this outline is to contrast the colour of each illuminated letter with that of the one next it, both as regards the colour of the letter itself and of its ornament.

For the bodies of the initials we cannot do better than Red and Blue, the ever-used colours of the old illuminators. Suppose, then, the body of the D is coloured in Madder Lake, or Crimson Lake and White, one of these being used in preference to Vermilion, which in large quantity on a small page would be too staring; the Madder Lake or Crimson Lake may run up the whole of the curling stem above, and continue in the stem below till it enlarges, when the branch may become Blue; say Ultramarine, or French Ultramarine with White. The oblong compartment to the left of the upright of the D may be the same Blue, stopping short at the stem below, but above running on to the right as far as the first leaf, beyond which it changes to raised burnished Gold, and so on, Blue and Gold alternately in each compartment surrounding the outer leaves; the



number of the spaces being such that the small triangular space above and to the right of the upright stroke of the D shall be reached by a Blue, which will thus seem to fall naturally into that place. The spaces within the inner lines of the curling stems above to the left of the D should be raised and burnished Gold. The two large triangular spaces to the extreme right of the D, above and below, should be Blue, as also the small triangular space to the left below, corresponding with the one above, as far as the first leaflet, where the Blue is continued down the thorn-like border outside the stem, which it will be remembered is to be red as far as the enlargement; but the Blue is not continued into the space within the curling stem; here its place is taken by Gold, similarly to the circles above the D; and to the extreme left the alternate Blue and Gold arrangement holds also, reflecting that of the outer spaces above. Within the D the stem is Blue, and the ground raised and burnished Gold. The leaves in and about all the letters, as well as those at the extremities of the finials, are Ultramarine, Deep Cadmium, Madder Lake, and Emerald Green; the colours being harmoniously disposed by alternations of each. The extreme outer bar which surrounds the letters is raised burnished Gold. Lastly, the whole is to be re-

outlined in Black; and fine White lines on a ground previously tinted with White are to be drawn close within the Black outlines of the principal leaves along the middle of the stems, and whatever Black patterns occur on the grounds in our outline.

The O should be coloured on the same principle, but with the colours reversed; the body of the letter being Blue, the surrounding triangles and the principal centre stem Red. It may have in addition to the Gold border, Gold semicircles in its corner-spaces, or the semicircles may be coloured Blue, if preferred.

The A is to be coloured on the same principle as the D; the long straight border being Blue to the right, and Red carried down from the first stroke of the A along the left.

In the finials, spaces in the thorn-like borders outside the circlets may be alternated with Blue, Red, and Gold.

The small letters may be filled in with Vermilion or Sepia, according to taste.





P.L2

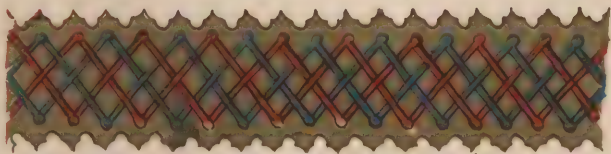






P.L. 3.





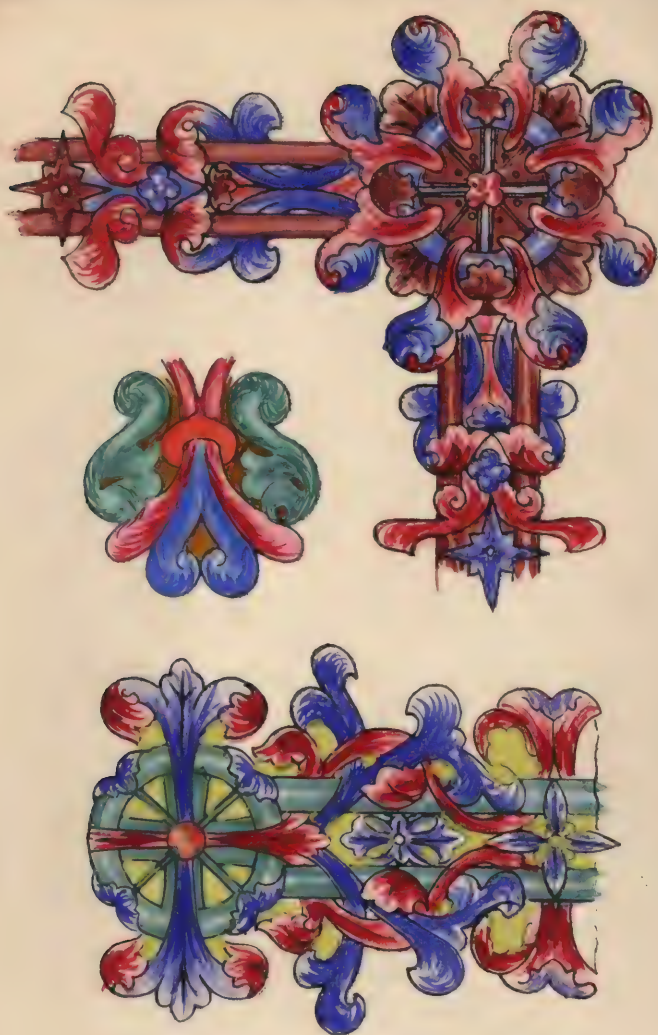
P.L. 4.

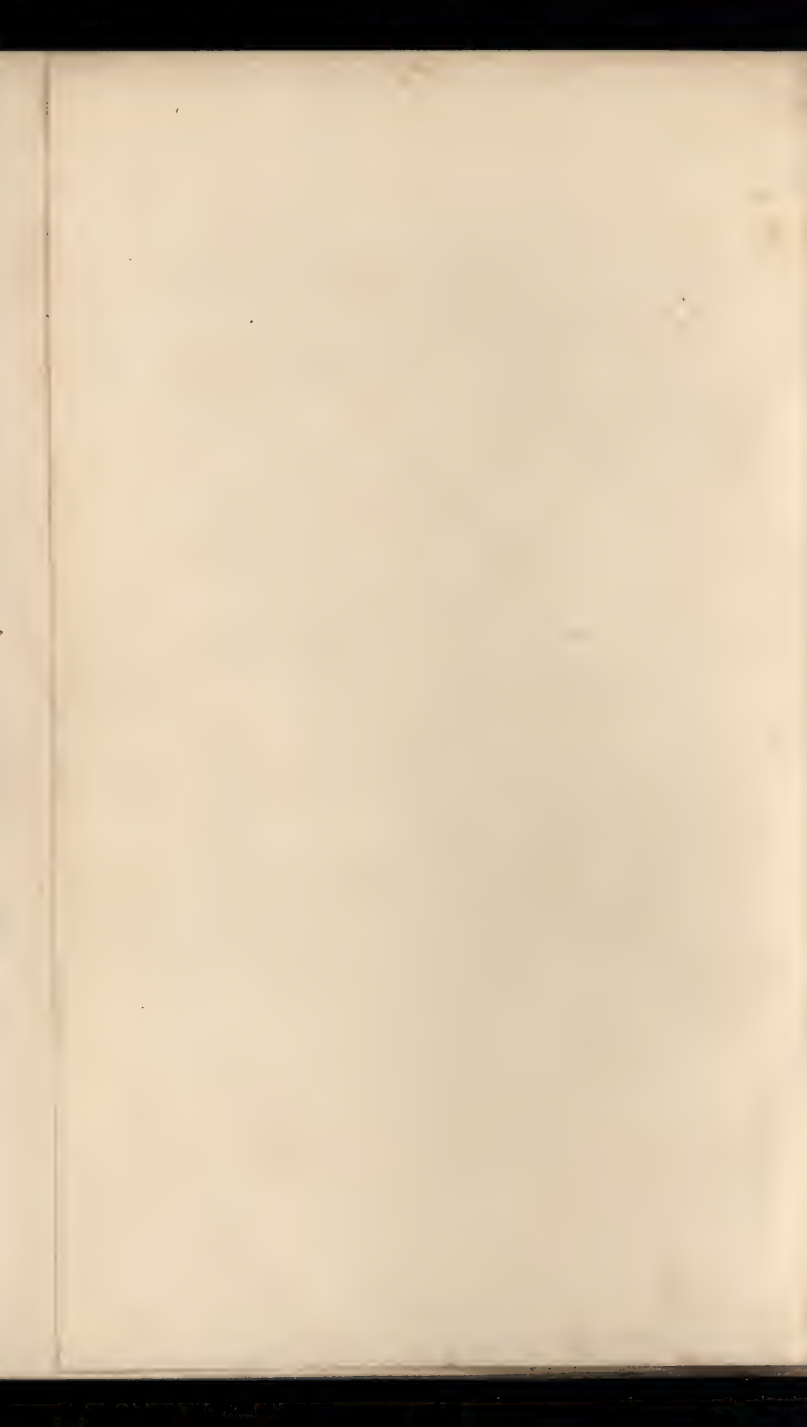




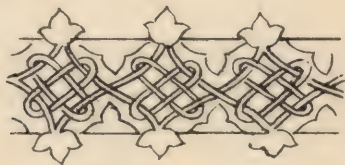
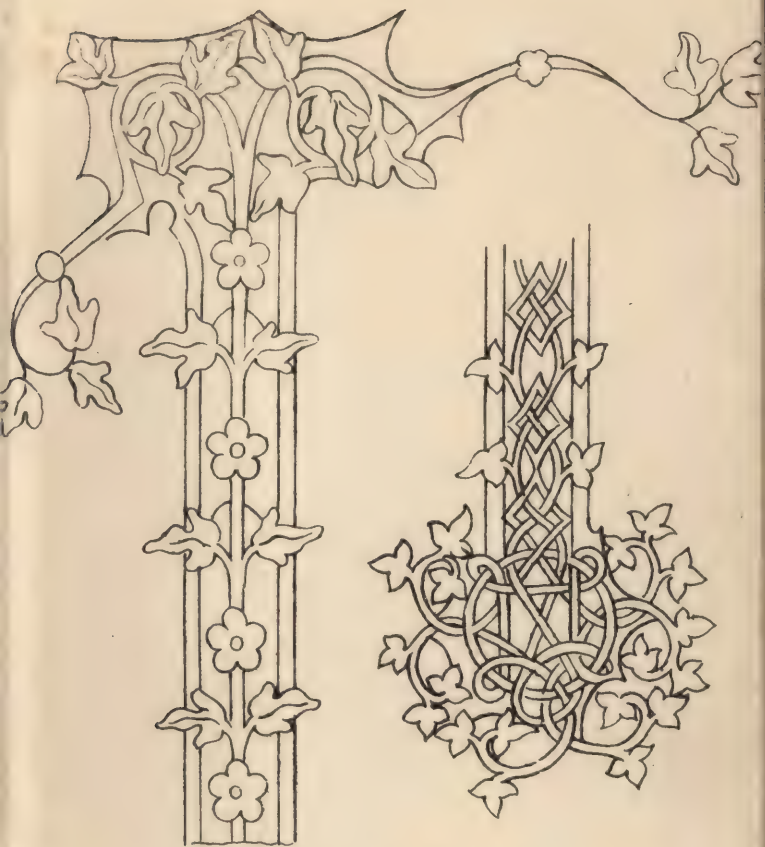




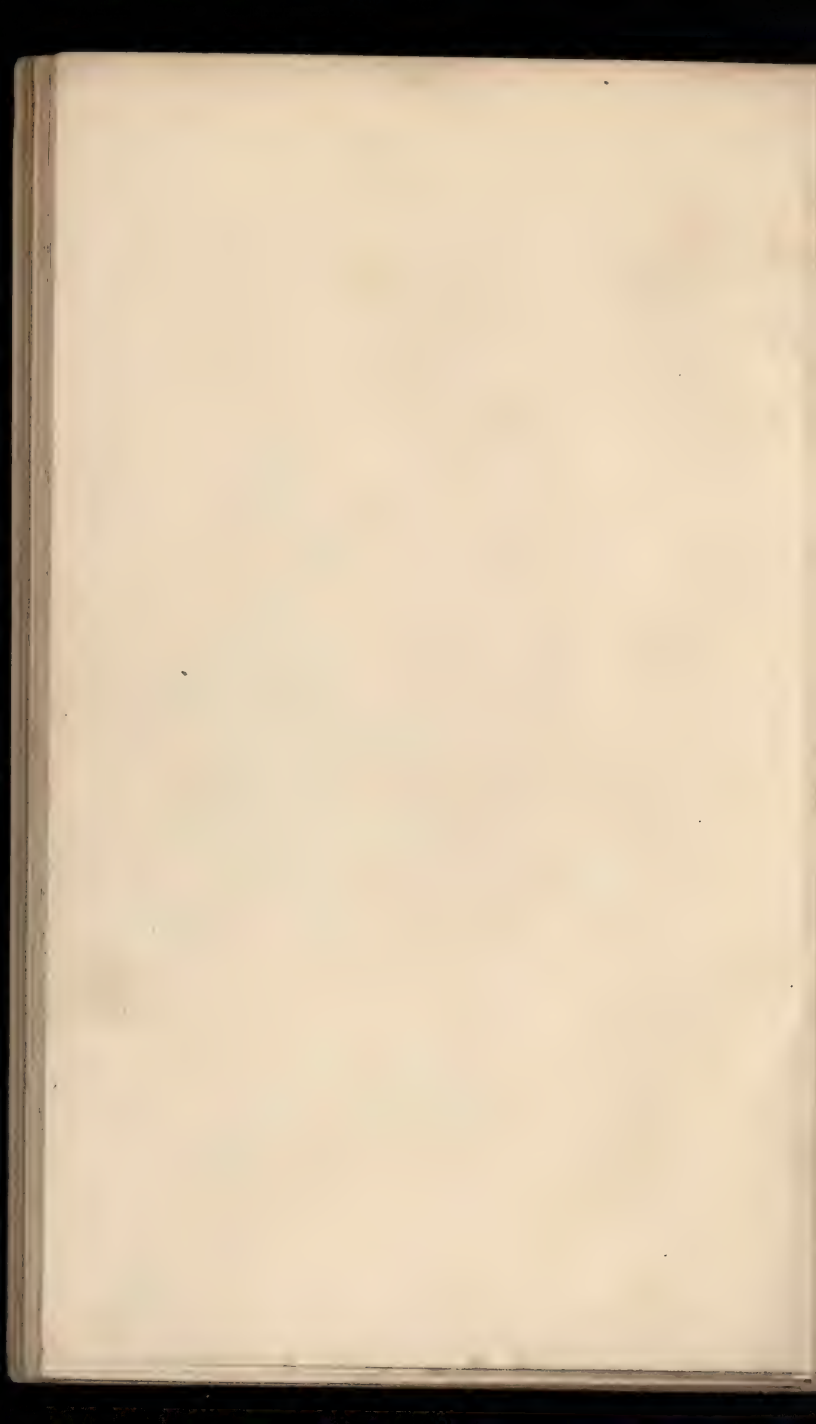








Pl 7.





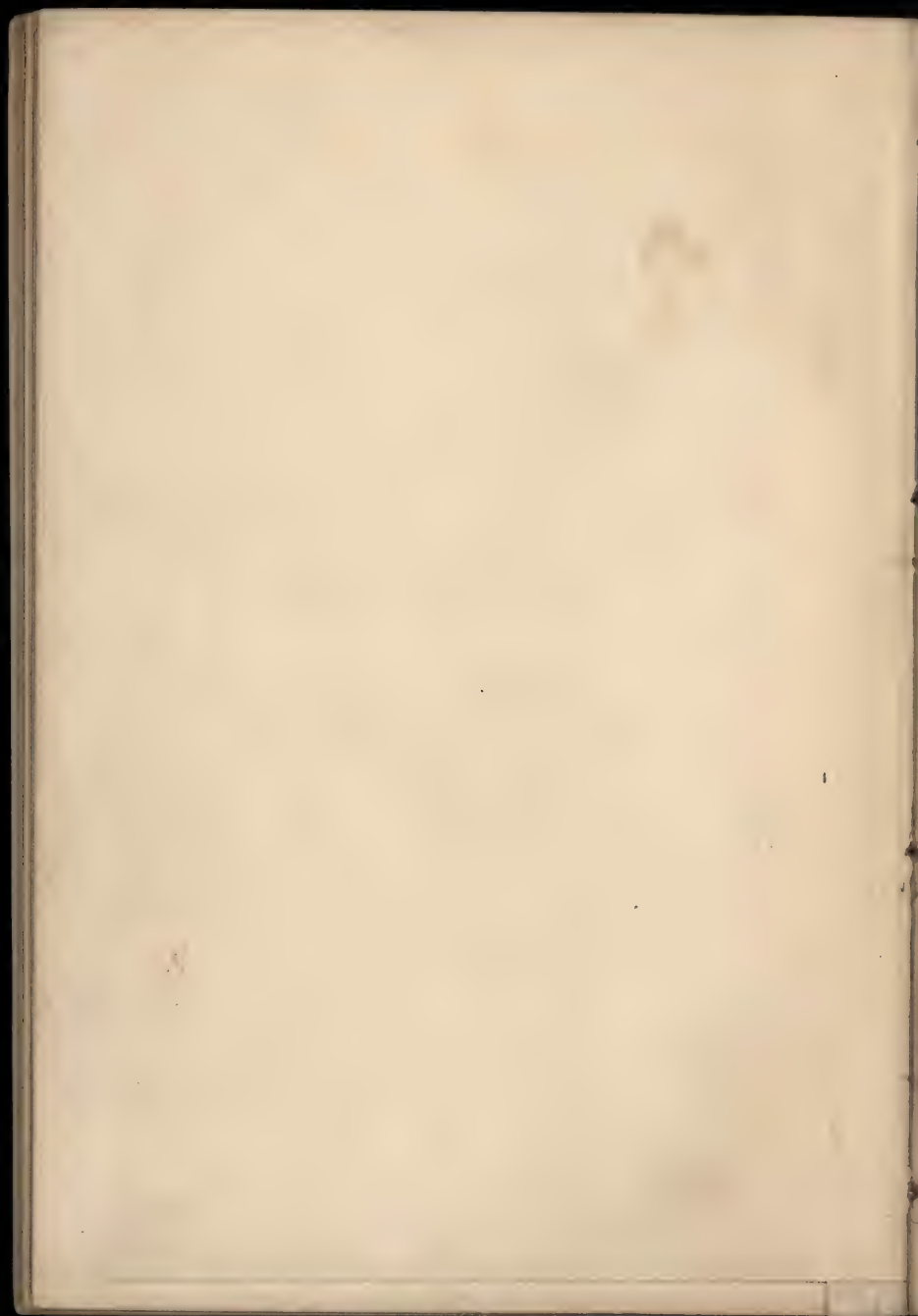
Pl. 8.

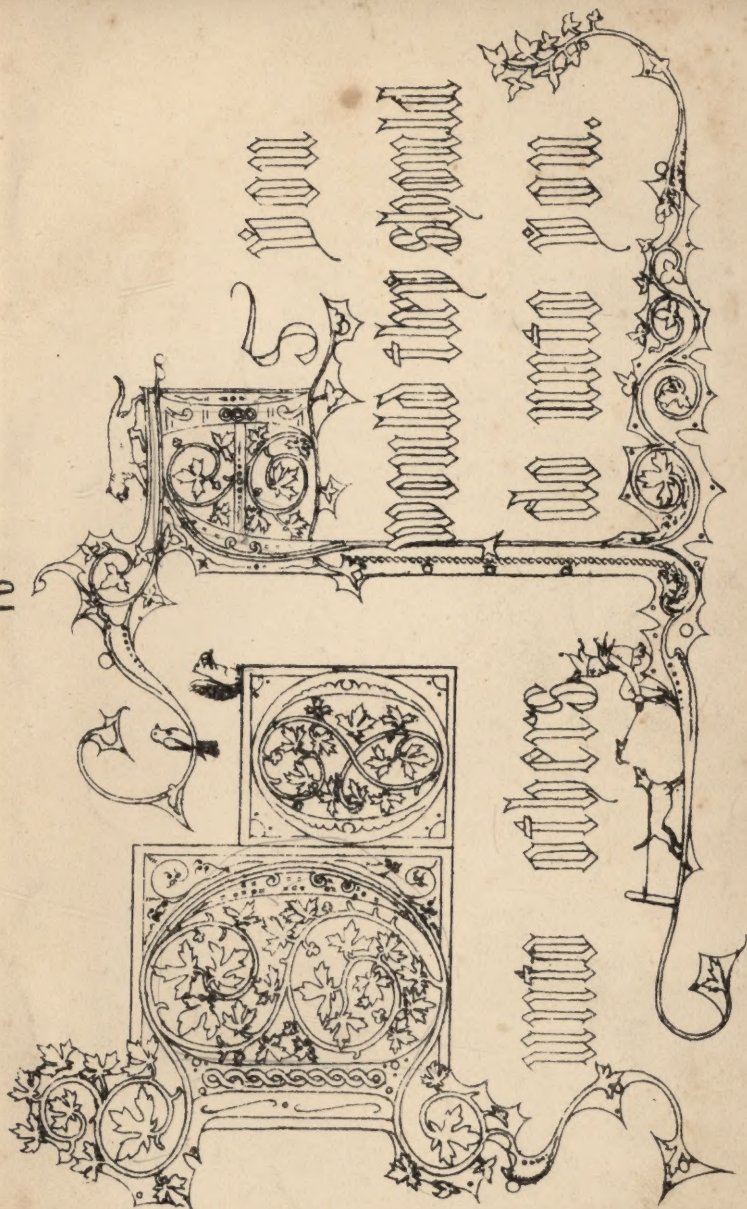




Pl. 9







86-826009

GETTY CENTER LIBRARY



3 3125 00140 2557



